

What is claimed is:

1 1. A power voltage control circuit for a CPU, wherein
2 the CPU has at least one power indication pin to output a power
3 indication signal, the control circuit comprising:

4 a selection unit having a first input terminal coupled
5 to the power indication pin, a second input
6 terminal and a control terminal;

7 a register to store an adjustment signal;

8 a combination unit to produce a first signal and output
9 to the second terminal of the selection unit
10 according to the power indication signal and the
11 adjustment signal;

12 a selection controller to output a selection signal to
13 the control terminal of the selection unit, such
14 that the selection unit outputting one power
15 indication signal and the first signal; and

16 a PWM controller coupled to the selection unit to produce
17 a power voltage to the CPU according to the power
18 indication signal or the first signal.

1 2. The control circuit as claimed in claim 1, wherein
2 the CPU is disposed in a computer system, the selection unit
3 outputs the power indication signal when the computer system
4 is operated in a normal mode, and the selection unit outputs
5 the first signal when the computer system is operated in
6 overclock mode.

1 3. The control circuit as claimed in claim 2, further
2 comprising a timer controller for outputting a reset signal
3 when the CPU does not operate normally in overclock mode,

4 causing the power indication signal output from the selection
5 unit thereby rebooting the computer system.

1 4. The control circuit as claimed in claim 2, wherein
2 the register and the selection controller communicate with
3 the BIOS of the computer system through an interface bus.

1 5. The control circuit as claimed in claim 3, wherein
2 the timer controller counts for a predetermined time interval
3 and outputs the reset signal after rebooting the computer
4 system, the BIOS of the computer system outputs a disable
5 signal to terminate counting by the timer controller when the
6 CPU operates normally.

1 6. The control circuit as claimed in claim 1, wherein
2 the combination unit comprises:

3 a decode unit to convert the power indication signal into
4 a digital value according to a corresponding
5 relationship;

6 an adder to add the digital value and the adjustment
7 signal and output a second signal; and

8 coding unit to convert the second signal into the first
9 signal and output to the second terminal of the
10 selection unit, according to the corresponding
11 relationship.

1 7. The control circuit as claimed in claim 1, wherein
2 the CPU adjusts the power indication signal according to load
3 and operating temperature thereof.

1 8. A control circuit for power voltage of a CPU,
2 wherein the CPU has at least one power indication pin to output

3 a power indication signal, and the CPU adjusts the power
4 indication signal according to load and operating temperature
5 thereof, the control circuit comprising:

6 a selection unit having a first input terminal coupled
7 to the power indication pin, a second input
8 terminal and a control terminal;

9 a combination unit to produce a first signal and output
10 to the second terminal of the selection unit
11 according to the power indication signal and an
12 adjustment signal;

13 a selection controller to output a selection signal to
14 the control terminal of the selection unit, such
15 that the selection unit outputting one power
16 indication signal and the first signal; and

17 a PWM controller coupled to the selection unit to supply
18 a power voltage to the CPU according to the power
19 indication signal or the first signal.

1 9. The control circuit as claimed in claim 8, wherein
2 the CPU is disposed in a computer system, the selection unit
3 outputs the power indication signal when the computer system
4 is operated in a normal mode, and the selection unit outputs
5 the first signal when the computer system is operated in
6 overclock mode.

1 10. The control circuit as claimed in claim 9, further
2 comprising a timer controller for outputting a reset signal
3 when the CPU does not operate normally in overclock mode,
4 causing the power indication signal to be output from the
5 selection unit thereby rebooting the computer system.

1 11. The control circuit as claimed in claim 10, wherein
2 the timer controller counts for a predetermined time interval
3 and outputs the reset signal after rebooting the computer
4 system, the BIOS of the computer system outputs a disable
5 signal to stop the counting of the timer controller when the
6 CPU operates normally.

1 12. The control circuit as claimed in claim 11, wherein
2 the selection controller communicates with the BIOS of the
3 computer system through an interface bus, and the adjustment
4 signal is an analog signal from an external circuit.

1 13. The control circuit as claimed in claim 12, wherein
2 the combination unit is an analog adder to add the power
3 indication signal and the adjustment signal and output the
4 first signal to the second terminal of the selection unit.